Mr. Jack Beilfuss
Envirotech Extrusions, Inc.
4810 Woodside Drive
Richmond, Indiana 47374

Dear Mr. Beilfuss:

Re: Exempt Construction and Operation Status,
177-13889-00076

The application from Envirotech Extrusions, Inc, received on February 8, 2001 has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following equipment used in the manufacture of recycled rubber and plastic cargo bed liners, horse trailer wall liners, mud flaps, and miscellaneous die cut products located at 4810 Woodside Drive Richmond, Indiana 47374 is classified as exempt from air pollution permit requirements:

Proposed Equipment

(a) Two (2) extruders, identified as EU#3 and EU#4, each will have the maximum capability to extrude 800 pounds per hour of resin and rubber.

Existing Equipment

(a) Two (2) extruders, identified as EU#1 and EU#2. Extruder EU#1 has a maximum capability to extrude 800 pounds per hour of resin and rubber, and extruder EU#2 has a maximum capability to extrude 1000 pounds per hour of resin and rubber;

(b) One (1) pelletizer EU#5 on grinder EU#6, with a maximum capacity of 250 pounds per hour. The PM emissions from this facility is controlled by a cyclone collector vacuum EC #3;

(c) One (1) grinder, identified as EU#7, with a maximum capacity of 2,000 pounds per hour. The PM emissions from this facility is controlled by cyclone collector vacuum EC #1;

(d) One (1) grinder, identified as EU#2, with a maximum capacity of 1,500 pounds per hour. The PM emissions from this facility is controlled by cyclone collector vacuum EC#2;

(e) Rubber and resin mixing operation rated at 1,000 pounds per hour;

(f) Resin storage drum, capable of handling a maximum of 7,000 pounds of resin per day; and

(g) Rubber storage drum, capable of handling a maximum of 13,000 pounds of rubber per day.

(h) Three (3) natural gas-fired radiant heaters, each has a heat input capacity of 0.1 million British Thermal Units per hour (mmBtu/hr); and

(i) Six (6) natural gas-fired radiant heaters, each has a heat input capacity of 0.15 million

British Thermal Units per hour (mmBtu/hr).

The following conditions shall be applicable:

(1) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuos opacity monitor in a six (6) hour period.

(2) Pursuant to 326 IAC 6-3-2 (Process Operations), the PM emissions from following facilities shall be limited as follows:

Facility ID	Process Weight Rate (ton/hr)	PM Emissions Limit (lb/hr)
Extruder EU #1	0.40	2.2
Extruder EU #2	0.50	2.57
Extruder EU #3	0.40	2.2
Extruder EU #4	0.40	2.2
Pelletizer Extruder EU #5	0.125	1.0
Grinder 1	1.0	4.1
Grinder 2	0.75	3.4
Pelletizer / Grinder 3	0.125	1.0

The pounds per hour limitation shall be calculated with the following equation:

$E = 4.10\ P^{0.67}$ where: E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

(3) The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

The source is re-permitted based on the reformed 326 IAC 2.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

APD

cc: File - Wayne County
Wayne County Health Department
Air Compliance - Warren Greiling
Permit Tracking - Janet Mobley
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Nowak

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for an Exemption

Source Background and Description

Source Name:	Envirotech Extrusions, Inc.
Source Location:	4810 Woodside Drive, Richmond, Indiana 47374
County:	Wayne
SIC Code:	5541
Operation Permit No.:	177-13889-00200
Permit Reviewer:	Aida De Guzman

The Office of Air Quality (OAQ) has reviewed an application from Envirotech Extrusions, Inc. relating to the construction and operation of the following equipment used in the manufacture of recycled rubber and plastic cargo bed liners, horse trailer wall liners, mud flaps, and miscellaneous die cut products:

Proposed Equipment

(a) Two (2) extruders, identified as EU#3 and EU#4, each will have the maximum capability to extrude 800 pounds per hour of resin and rubber.

Existing Equipment

(a) Two (2) extruders, identified as EU#1 and EU#2. Extruder EU#1 has a maximum capability to extrude 800 pounds per hour of resin and rubber, and extruder EU#2 has a maximum capability to extrude 1000 pounds per hour of resin and rubber;

(b) One (1) pelletizer EU#5 on grinder EU#6, with a maximum capacity of 250 pounds per hour. The PM emissions from this facility is controlled by a cyclone collector vacuum EC #3;

(c) One (1) grinder, identified as EU#7, with a maximum capacity of 2,000 pounds per hour. The PM emissions from this facility is controlled by cyclone collector vacuum EC #1;

(d) One (1) grinder, identified as EU#2, with a maximum capacity of 1,500 pounds per hour. The PM emissions from this facility is controlled by cyclone collector vacuum EC#2;

(e) Rubber and resin mixing operation rated at 1,000 pounds per hour;

(f) Resin storage drum, capable of handling a maximum of 7,000 pounds of resin per day;

(g) Rubber storage drum, capable of handling a maximum of 13,000 pounds of rubber per day;

(h) Three (3) natural gas-fired radiant heaters, each has a heat input capacity of 0.1 million

British Thermal Units per hour (mmBtu/hr); and

(i) Six (6) natural gas-fired radiant heaters, each has a heat input capacity of 0.15 million British Thermal Units per hour (mmBtu/hr).

The source is being re-permitted based on the reformed 326 IAC 2-1.

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on February 8, 2001.

Emission Calculations

(a) Extrusion Emissions:
Mixture of extruded material, rubber to resin = 65% : 35%

Facility ID	Material Extruded	Throughput (pounds/hour)	VOC Emission Factor	VOC Emissions (tons/year)	Individual Extruder Total VOC Emissions (tons/year)	CO Emission Factor (lb/MM lb throughput)	CO Emissions (tons/yr)
Extruder EU #1	Resin	300	1 lb/ton	0.66	0.69	100	0.13
	Rubber	500	12.4 lb/1MM lb	0.027		-	0.0
Extruder EU #2	Resin	350	1 lb/ton	0.77	0.81	100	0.15
	Rubber	650	12.4 lb/1MM lb	0.035		-	0.0
Extruder EU #3	Resin	300	1 lb/ton	0.66	0.69	100	0.13
	Rubber	500	12.4 lb/1MM lb	0.027		-	0.0
Extruder EU #4	Resin	300	1 lb/ton	0.66	0.69	100	0.13
	Rubber	500	12.4 lb/1MM lb	0.027		-	0.0
Pelletizer Extruder EU #5	Resin	87.5	1 lb/ton	0.19	0.19	100	0.04
	Rubber	162.5	12.4 lb/1MM lb	0.0		-	0.0
TOTAL					3.09		0.58

Methodology:

VOC Emission, ton/yr = resin throughput, lb/hr * ton/2000 lb * Ef, lb/ton * ton/2000 lb * 8760 hrs/yr
VOC Emission, ton/yr = rubber throughput, lb/hr * Ef, lb/MM lb * ton/2000 lb * 8760 hr/yr

The 1 lb/ton emission factor used for the resin extrusion was developed by Wisconsin DNR based from various stack testing of plastic manufacturing sources. EPA has recommended its use versus emission factor developed by the Composite Institute, Division of Plastic Industry.

The 12.4 lb/1 x 10^6 lb emission factor used for the rubber extrusion came from the 1994 Rubber Manufacturing Association (RMA).

(b) Grinding Emissions:

Facility ID	Cyclone w/ Bag Filter Gas Air Flow Rate (acfm)	Cyclone w/ Bag Filter Inlet Grain Loading (gr/dscf)	PM/PM10 Emissions Before Control (tons/year)	PM/PM10 Emissions After Control (tons/year)
Grinder #1	2,500	0.023	2.2	0.04
Grinder #2	2,000	0.022	1.65	0.03
Pelletizer Grinder #3	1,000	0.0074	0.30	0.01
TOTAL			4.2	0.08

Note: All the cyclone w/ bag filter have control efficiency of 98%.

The pelletizer extrudes the scrap resin/rubber into strips and then pelletize it.

Methodology:
PM Emissions = air flow rate, cfm * 60 min/hr * inlet grain loading, gr/dscf * lb/7000 gr * ton/2000 lb * 8760 hrs/yr

Potential To Emit of Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	4.2
PM-10	4.2
SO_2	0.0
VOC	3.09
CO	0.98
NO_x	0.5

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of pollutants are less than the emission threshold that requires a registration (i.e. PM is less than 5 tons per year, and VOC is less than 10 tons per year).

County Attainment Status

The source is located in Wayne County.

Pollutant	Status (attainment, maintenance attainment, or unclassifiable; severe, moderate, or marginal nonattainment)
PM-10	attainment
SO_2	maintenance
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	Not determined

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Wayne County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Wayne County has been classified as attainment or unclassifiable for all the other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing re-permitted source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Potential To Emit (tons/year)
PM	0.08
PM-10	0.08
SO_2	0.0
VOC	3.09
CO	0.98
NO_x	0.5

(a) This existing re-permitted source is **not** a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)
This re-permitted source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:
(a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons/year.

Federal Rule Applicability

(a) New Source Performance Standards:
(1) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) National Emission Standards for Hazardous Air Pollutants:
(1) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

(a) 326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(1) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

(b) 326 IAC 6-4 (Fugitive Dust Emissions)
The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

State Rule Applicability - Individual Facilities

(a) 326 IAC 6-3-2 (Process Operations)
This rule mandates a particulate matter (PM) emissions limit from the following facilities as follows:

Facility ID	Process Weight Rate (ton/hr)	PM Emissions Limit (lb/hr)
Extruder EU #1	0.40	2.2
Extruder EU #2	0.50	2.57
Extruder EU #3	0.40	2.2
Extruder EU #4	0.40	2.2
Pelletizer Extruder EU #5	0.125	1.0
Grinder 1	1.0	4.1
Grinder 2	0.75	3.4
Pelletizer / Grinder 3	0.125	1.0

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where: E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The above facilities are in compliance with the PM limits, since their potential emissions before control are less than what is allowed by 326 IAC 6-3.

(b) 326 IAC 8-1-6 (New Facilities, General Reduction Requirements)
This rule applies to new facilities as of January 1, 1980, which have potential VOC emissions of 25 tons or more per year, located anywhere in the state, which are not regulated by other provisions of this article, 326 IAC 8.

The extruders are not subject to this rule because they don't have the potential VOC emissions of 25 tons per year or greater.

(c) 326 IAC 8 (Volatile Organic Sources)
There are no other provisions in 326 IAC that may apply to this source, because it is not one of the specific sources listed in the rules.

Conclusion

The construction and operation of the new extruders, together with the existing facilities used for the manufacture of recycled rubber and plastic cargo bed liners, horse trailer wall liners, mud flaps, and miscellaneous die cut products shall be subject to the conditions of the attached **Exemption 177-13889-00076.**

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler

9 radiant heaters:
3 @ 0.1 mmBtu/hr = 0.3 mmBtu/hr
6 @ 0.15 mmBtu/hr = 0.9 mmBtu/hr

Company Name: **Envirotech Extrusions, Inc.**
Address City IN Zip: **4810 Woodside Dr., Richmond, IN 47374**
Exemption No.: **177-13889-00076**
Reviewer: **Aida De Guzman**
Date Application Received: **Feb. 8, 20001**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
1.2	10.5

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.0	0.0	0.0	0.5	0.0	0.4

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).